



## Fig. 3 20 MODIFY A COMMAND SHELL OF THE EXTENSIBLE FIRMWARE INTERFACE 21 TO INCLUDE AN EXTENSIBLE FIRMWARE INTERFACE (EFI) DRIVER THAT OPERATES TO CONFIGURE AVAILABLE FLASH ROM SPACE NORMALLY RESERVED FOR FIRMWARE AS A DIAGNOSTIC DISK DRIVE CONFIGURE THE EFI DRIVER TO INCLUDE DATA COMPRESSION AND -29 DECOMPRESSION ROUTINES TO INCREASE THE QUANTITY OF DATA THAT MAY BE STORED IN THE CONFIGRED DISK DRIVE SPACE. OR **ENCRYPTION ROUTINES FOR SECURITY PURPOSES** STORE THE MODIFIED EXTENSIBLE FIRMWARE INTERFACE 22 AND THE EFI DRIVER IN THE READ-ONLY-MEMORY WHEN THE COMPUTER SYSTEM IS INITIALIZED, USE THE EFI DRIVER TO 23 CONFIGURE THE AVAILABLE SPACE IN THE FLASH MEMORY THAT IS NOT ALLOCATED TO THE FIRMWARE AS THE DIAGNOSTIC DISK DRIVE 24 LOAD DIAGNOSTIC PROGRAMS IN THE NEWLY-CONFIGURED DIAGNOSTIC DISK DRIVE SELECTIVELY RUN THE STORED DIAGNOSTIC PROGRAMS AND 25 DISPLAYING THE DIAGNOSTIC PROGRAMS USING AN EVENT VIEWER IF THE COMPUTER SYSTEM FAILS TO BOOT ITS OPERATING -26 SYSTEM DUE TO A PROBLEM WITH THE HARD DISK DRIVE. BOOT THE COMPUTER SYSTEM TO THE EFI COMMAND SHELL -27 SELECTIVELY RUN A HARD DRIVE DIAGNOSTIC PROGRAM FROM THE DIAGNOSTIC DRIVE TO FIND THE ERROR AND CORRECTS IT REBOOT THE COMPUTER SYSTEM TO SUCCESSFULLY BOOT -28 THE OPERATING SYSTEM FROM THE HARD DISK DRIVE -30 STORE POWER ON SELF TEST (POST) ERROR LOGS IN FILES ON THE DIAGNOSTIC DISK DRIVE THAT MAY BE READ BY THE OPERATING SYSTEM DURING BOOT AND DISPLAYED BY AN EVENT VIEWER